

We claim:

1. A method for purifying an RNA-protein complex formed *in vitro* comprising:
  - (a) providing an RNA fusion molecule comprising a target RNA sequence and at least two different RNA tags, wherein at least one RNA tag interacts with a ligand in a reversible manner;
  - (b) contacting the RNA fusion molecule with a cellular extract;
  - (c) providing conditions that allow the formation of an RNA-protein complex on the target RNA sequence; and
  - (d) subjecting the RNA-protein complex to at least two different affinity purification steps, each step comprising binding one RNA tag to an affinity resin capable of selectively binding one RNA tag and eluting the RNA tag from the affinity resin after substances not bound to the affinity resin have been removed.
  
2. A method for purifying an RNA-protein complex formed *in vitro* comprising:
  - (a) providing an RNA fusion molecule comprising a target RNA sequence and at least two different RNA tags, wherein at least one RNA tag interacts with a ligand in a reversible manner;
  - (b) contacting the RNA fusion molecule with a protein mixture;
  - (c) providing conditions that allow the formation of an RNA-protein complex on the target RNA sequence; and
  - (d) subjecting the RNA-protein complex to at least two different affinity purification steps, each step comprising binding one RNA tag to an affinity resin capable of selectively binding one RNA tag and eluting the RNA tag from the affinity resin after substances not bound to the affinity resin have been removed.
  
3. A method for purifying an RNA-protein complex formed *in vivo* comprising:
  - (a) expressing in a eukaryotic cell an RNA fusion molecule comprising a target RNA sequence and at least two different RNA tags, wherein at least one RNA tag interacts with a ligand in a reversible manner;
  - (b) providing conditions that allow the formation of an RNA-protein complex on the target RNA sequence;
  - (c) generating a cellular extract;
  - (d) subjecting the cellular extract to at least two different affinity purification steps, each step comprising binding one RNA tag to an affinity resin capable of selectively binding one RNA

tag and eluting the RNA tag from the affinity resin after substances not bound to the affinity resin have been removed.

4. The method of claim 1, 2, or 3 wherein at least one RNA tag is repeated.
5. The method of claim 1, 2, 3, or 4 wherein the RNA tags are selected from the group consisting of a streptavidin binding sequence (S1), a MS2 coat protein binding sequence, a streptomycin binding sequence (Streptotag), a sephadex binding sequence (D8), a N protein binding sequence (nut), a REV binding sequence, a TAT-binding sequence and a R17 coat protein binding sequence.
6. The method of claim 5, wherein the RNA tags comprise at least one streptavidin binding sequence and at least one MS2 coat protein binding sequence.
7. The method of claim 1, 2, 3, 4, 5, or 6 wherein at least one RNA tag binds to an affinity resin through a fusion protein comprising:
  - (a) a polypeptide that binds specifically to the RNA tag; and
  - (b) a polypeptide that binds specifically to the affinity resin.
8. The method of claim 7 wherein the polypeptide that binds specifically to the affinity resin is selected from the group consisting of a maltose binding protein, a 6-histidine peptide, glutathione S transferase and a portion thereof sufficient to bind specifically to the affinity resin.
9. The method of claim 1, 2, 3, 4, 5, 6, 7, or 8, wherein the RNA fusion molecule further comprises at least one insulator sequence.
10. An RNA fusion molecule comprising:
  - (a) a target RNA sequence; and
  - (b) at least two different RNA tags, wherein at least one RNA tag interacts with a ligand in a reversible fashion.
11. The RNA fusion molecule of claim 10, wherein at least one RNA tag is repeated.

12. The RNA fusion molecule of claim 10 or 11, wherein the RNA tags are selected from the group consisting of a streptavidin binding sequence (S1), a MS2 coat protein binding sequence, a streptomycin binding sequence (Streptotag), a sephadex binding sequence (D8), a N protein binding sequence (nut), a REV binding sequence, a TAT-binding sequence and a R17 coat protein binding sequence.
13. The RNA fusion molecule of claim 12, wherein the RNA tags comprise at least one streptavidin binding sequence and at least one MS2 coat protein binding sequence.
14. The RNA fusion molecule of claim 9, 10, 11, 12 or 13 further comprising at least one insulator sequence.
15. An isolated DNA construct encoding the RNA fusion molecule of claim 9, 10, 11, 12, 13 or 14.
16. A vector comprising the isolated DNA construct of claim 15.
17. A host cell comprising the vector of claim 16.
18. A method for screening a test compound for its ability to modulate an RNA-protein complex comprising:
  - (a) performing the method according to claim 1;
  - (b) performing the method according to claim 1, wherein the cellular extract further comprises a test compound; and
  - (c) observing a difference, if any, between the RNA-protein complex purified in step (a) and the RNA-protein complex, if any, purified in step (b), wherein the presence of the difference indicates that the test compound modulates the RNA-protein complex.
19. A method for screening a test compound for its ability to modulate an RNA-protein complex comprising:
  - (a) performing the method according to claim 2;
  - (b) performing the method according to claim 2, wherein the cellular extract further comprises a test compound; and

(c) observing a difference, if any, between the RNA-protein complex purified in step (a) and the RNA-protein complex, if any, purified in step (b), wherein the presence of the difference indicates that the test compound modulates the RNA-protein complex.

20. A kit for detecting an RNA-protein complex comprising the RNA fusion molecule of claim 9, 10, 11, 12, 13 or 14.

21. A kit for detecting an RNA-protein complex comprising the isolated DNA construct of claim 15.

22. A kit for detecting an RNA-protein complex comprising the vector of claim 16.